**REMARKS**

The following remarks are numbered with the paragraph number of the Office Action to which they respond.

1. The proposed drawing corrections having been approved, corrected drawings are now submitted and their entry is requested.

7 and 8. The Examiner has rejected claims 7,8, 19, 23 and 25 on the basis that the specification is non-enabling with respect to certain content of each of those claims.

This rejection is traversed.

A Declaration of Dr. Robert Lieberman is attached which asserts that the subject matter is enabled.

It is submitted that the rejection be withdrawn.

9 and 10. Claims 1, 6, 17, 18 and 22 were rejected under section 103 as being unpatenable over DiGiovanni et al. in view of Tarbox and Yunoki.

The comments in the prior response dated November 25, 2002 are incorporated into this response, in particular the distinction between Tarbox and the present invention.

DiGiovanni teaches an attenuating element which may be utilized in a termination assembly to provide reflection-less termination for an optical fiber or

in a coupling assembly to introduce a controlled degree of attenuation between two sections of fiber. Col 4: 18-26. Nowhere does DiGiovanni teach or care about the present invention of maintaining a constant power loss per unit length over the length of the fiber (claims 1, 6) or making the power loss vary in a controlled way over the length of the fiber (claims 17, 18) or having a parameter vary as a function of position within the fiber to compensate for any non0linear power loss over the length of the fiber (claim 22).

Tarbox teaches an attenuator by use of coils of fiber that cause power loss due to their having a higher attenuation per unit length than the signal carrying fibers. See Abstract. But Tarbox does this by substantially uniform attenuation through the length of the attenuating fiber since if this is known the optical fiber may be cut to a predetermined length to provide a required attenuation value (see col. 2, lines 3-6). Tarbox cites as an example that lengths 18 of optical fiber of the devices are cut from fibers having a known attenuation per unit length (which is substantially uniform throughout the length) to predetermined lengths to provide required attenuation values (col. 2, lines 57-65). In particular Tarbox does not vary a parameter from one end of the fiber to another, but to the contrary, the parameter is constant..

By contrast, in the present invention for sensor applications, light is introduced at the front of the fiber and light is lost faster in the spatial transient region than it I further along the fiber. The goal is to make a fiber that has a lower intrinsic or inherent loss in the spatial transient region.

The Examiner has cited various portions of Tarbox and Yunoki as showing such a parameter. But it is submitted that neither Tarbox nor Yunoki show describe a parameter of the fiber that varies so as to maintain a constant power loss per unit length of the fiber.

Tarbox and Yunoki teach uniform and constant rate of attenuation while in the present invention the variation in the parameter changes over the length of the fiber. In fact such a condition would be detrimental, a failure of the goals of Tarbox and Yunoki.

Further the proposed combination of Tarbox or Yunoki with DiGiovanni is unworkable and in any event would not result in the present invention for the reasons given above.

11. Claims 3, 5, 21, and 26-27 were rejected under section 103 as being unpatenable over Hamburger in view of DiGiovanni in view of Tarbox or Yunoki.

This rejection is traversed.

First it is noted that a valid rejection is unlikely if it requires, as here, the combination of three separate references since it is unlikely that the required suggestion for the combination can be found.

Such is the case here. Hamburger is newly introduced. Hamburger teaches a fiber portion that that has been treated to obtain an increased scattering loss along a defined sensor portion, which allows changes in the refractive index of the environment to be monitored. But Hamburger does not need to find and is not interested in finding any particular point along the fiber where a sensing event has

taken place. Nor is Hamburger concerned with the problem of spatial transients. The Hamburger sensor is a prepared part of the device and only the change in condition at the sensor portion is of concern. Consequently there would be no purpose in combining any of DiGiovanni, Tarbox or Yunoki with Hamburger; and if such a combination was made it would not result in the present invention.

12. Claims 2 and 4 were rejected under section 103 as being unpatenable over Hamburger in view of DiGiovanni in view of Tarbox or Yunoki and further in view of Cramp.

This rejection is traversed.

The foregoing comments are applied to this rejection. Also contrary to the Examiner's citation to Cramp at col. 4 lines12-26, it is not the core that is made sensitive but rather "Around this inner portion is an outer layer 17 of a porous glass.... This sensitive layer extends throughout the thickness of the porous outer layer 17...." Col. 4, lines 21-26. Also at col. 3, line 67-col. 4, line 11 Cramp refers to a porous outer layer 4, not the core.

Further the proposed suggestion for combining Cramp which depends on the erroneous conclusion that the core is modified is itself unsupported since the proposed basis for the combination would have no application to either of Hamburger or DiGiovanni.

It is submitted that in consideration of the above comments the rejections have been over come and allowance of the claims is requested.